JOSEPH A. BOYLE

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EDUCATION

Rutgers University New Brunswick   New Brunswick, NJ
B.S., Computer Science (3.46 GPA)   September 2015 - Present

ACADEMIC RESEARCH

Visual MIMO: Calibrationless visible-light communication system using Android phones
- Integrated color-embedded message decoding and efficiency improvements into system's algorithms
- Designed and built an automated testing bench to analyze message transmission accuracy.
- Presented at Computer Vision and Pattern Recognition 2016 conference.

WORK EXPERIENCE

Learning Assistant (Computer Science)   *Piscataway, New Jersey*
Rutgers University, Rutgers Learning Centers   *August 2016 - Present*
- Facilitate a 55-minute recitation and a 80-minute study group.
- Actively encourage deeper understandings of concepts and their motivations.
- Prepare study materials for students.

Programmer   *Piscataway, New Jersey*
Rutgers University, School of Arts and Science IT   *September 2015 - June 2016*
- Developed a series of course searching modules and a staff directory module on Joomla!.
- Automated the transfer of data from old systems to the Joomla! CMS.

Line Cook   *Glendora, New Jersey*
Kitchen 519   *July 2014 - August 2015*
- Began as a dishwasher and worked through pantry, fryer, grill, and saute stations.

INDEPENDENT PROJECTS

Char: An 8-bit architecture with its own instruction set, CPU design, and simulator written in C.
Indigo: An Assembly-like language with a compiler written in C, run on the Char architecture.
VoxelGen: A procedurally generated Minecraft clone written in C++, using OpenGL for graphics.
Chemify: An Android application which solves various chemistry problems such as predicting chemical reactions, dimensional analysis, and chemical nomenclature.
Enigma Machine: A horror game written in Java and LWJGL.
RestaurantStock: A web-based restaurant inventory management system written in PHP.

RELEVANT COURSES

Computer Architecture,   Databases,   Data Structures,   Discrete Structures,
Independent Study in Computer Vision,   Principles of Programming Languages

SKILLS

Android, C, C++, Git, Java, Linux, MATLAB, OpenGL, PHP, SQL